

Muscle wasting, or sarcopenia, is a common cause of injury and disability in the elderly. A new review of the literature shows that a combination of resistance training with optimal nutritional status has a synergistic effect in prevention and treatment of sarcopenia.

Resistance training combined with adequate nutrition reduce muscle wasting in older adults

Muscle health and strength plays an important role in determining risk for falls, which result in fractures and other injuries which often result in disabilities. While bone loss has long been recognized as a normal consequence of aging, sarcopenia-the gradual loss of skeletal muscle mass and strength that occurs with advancing age-has recently received increased attention.

In a recent review of the literature published in the journal *Osteoporosis International*, researchers sought to identify nutritional factors that contribute to loss of muscle mass. The research was led by the International Osteoporosis Foundation Nutrition Working Group.

The value of resistance training combined with adequate nutrient intake was emphasized as the best way to avoid sarcopenia. The review highlighted the importance of protein, vitamin D, vitamin B12 and folic acid, as well as avoidance of excessive amounts of acid-producing foods. Fruits and vegetables, which are alkalinizing, should be balanced with meat and grain intake. Protein plays a vital role in muscle health and an intake of at least 1.0-1.2 g/kg of body weight per day is suggested for older adults. The group also found a moderate inverse relationship between vitamin D status and muscle strength. Vitamin B12, with or without folic acid (another B vitamin), additionally plays a role in muscle function and strength.

Muscle wasting is a process involving multiple factors, but the available evidence suggests that combining resistance training with optimal nutritional status has a synergistic effect in preventing and treating sarcopenia. Strategies to decrease the number of falls and fractures within the aging populations should include measures to prevent sarcopenia.

Mithal A et al. Impact of nutrition on muscle mass, strength, and performance in older adults. *Osteoporosis Int.* 2012 Dec 18.